Australian state port authority modernizes IT infrastructure with Microsoft cloud services

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George Tzikas, Senior IT Infrastructure Specialist, Port Authority of New South Wales

For more than a century, ships have transported about 90 percent of the world's trade. And as the volume of trade increases year by year, so too does the pressure placed on seaports to upgrade services and infrastructure. To stay competitive, ports are merging to create new transportation networks, share costs and revenue, and improve management. Governance is increasingly shifting from the public to the private sector to spur infrastructure investment. In 2013, the Australian state of New South Wales privately leased part of its port facilities and a year later consolidated five ports under the management of the Port Authority of New South Wales. To operate successfully, the new port network required a similar transformation in its IT environment.

Adapting to change

With a head office in Sydney, Australia, the Port Authority is a state-owned corporation responsible for commercial maritime operations at multiple locations on the country's east coast. It handles the navigation, operation, and security needs of commercial shipping, manages Sydney's two world-class international cruise terminals and responds to maritime emergencies.

In 2014, the Port Authority took on port management at three additional locations outside of Sydney. With the regional economy and approximately five million people in Australia's largest city relying on its services, the Port Authority decided to review its technology infrastructure.

The Port Authority maintained one datacenter for production and another for disaster recovery. The initial focus was on upgrading the disaster recovery environment. In addition, the organization faced a two-year deadline to take on IT management for the four other ports, including all the corporate business software and specialized technologies used in port operations.

With the recent mergers, the organization was managing approximately 200 servers and 80 terabytes (TB) of data. And on top of that, the Port Authority needed to migrate three domains to a newly formed central domain that would include all users and applications. After considering its options, the organization decided that the cloud was the best choice. Upgrading its on-premises

infrastructure would be too time-consuming and costly, but those weren't the only factors behind the decision.

"The main driver was gaining a more flexible and scalable IT architecture," explains Ian Chilton, Senior Manager, Solutions Development and Services at Port Authority of New South Wales "We've gone through a lot of changes, including a period of partial privatization, and we've merged with other ports within the state. So we were really looking for options offering flexibility and scope for change at this stage whilst also making some cost efficiencies."

Moving to the cloud

After a rigorous procurement process, the Port Authority chose Microsoft partner cubesys to help with the first phase of its transition to the cloud—migrating its disaster recovery and development environments to Azure. "Cubesys are experienced with the entire Azure platform and Microsoft products in general," says George Tzikas, Senior IT Infrastructure Specialist at Port Authority of New South Wales. "We were very impressed with the caliber of their engineers and the extra mile they'll go to deliver projects."

The Port Authority has the same confidence in Azure. "We wanted to move to a cloud platform, and we don't particularly want to own infrastructure, so that was part of the reason for the decision," says Tzikas. "We looked at multiple hosting vendors when we undertook the tender process. The costs were pretty much aligned

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Ian Chilton, Senior Manager, Solutions Development and Services, Port Authority of New South Wales

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Customer Name: Port Authority of New South Wales
Industry: Transportation and logistics—Water transportation services
Country or Region: Australia
Customer Website: www.portauthoritynsw.com.au
Employee Size: 400
Partner Name: cubesys
Partner Website: www.cubesys.com.au

Customer Profile
The Port Authority of New South Wales administers a network of harbors and ports on the eastern coast of Australia. The Port Authority's responsibilities include managing Sydney's world-class, award-winning international cruise terminals and the vital navigation, operation, and security needs of commercial shipping throughout the region.

Microsoft

across all the entities, but we found the most functionality with Azure. The Azure platform stood out to us because of its flexibility, multiple sites, security, and Microsoft's good partnership with cubesys."

The new disaster recovery solution is based on Microsoft Operations Management Suite, Azure Site Recovery, and Azure Backup services. Azure ExpressRoute connects the on-premises production datacenter to Azure for rapid and secure replication and recovery. In addition, an Azure StorSimple 8100

appliance with Veeam software is used to provide a local backup solution.

Improving insight

In combination with System Center Operations Manager, Operations Management Suite enables comprehensive oversight of the Port Authority's hybrid cloud environment. Chilton says, "Operations Management Suite gives us a greater level of visibility over our entire infrastructure in a user-friendly format."

Tzikas adds, "I like the capability and response times of the Operations Management Suite. It definitely has given us more flexibility than we had with our existing replication software."

Cubesys also helped the Port Authority set up a development and test environment on Azure, using Azure Site Recovery for migration and creating a self-service portal for developers to manage Azure Virtual Machines. "It provides the developers and testers with a one-stop shop where they don't have to deal with the complexity of setting up servers manually," says Chilton. "And again, that

comes back to the goal of bringing up services only when we need them and closing them down when we don't so that we get a much better, cost-effective usage of resources." In addition, cubesys has taken over the Port Authority's disaster recovery process as a managed service.

Still in the early stages of its IT transformation, the Authority looks forward to a more agile environment capable of providing better services to a mobile workforce of marine pilots and other port personnel. It's already using Azure Active Directory for single sign-on and to provide remote access to on-premises applications. The Port Authority of NSW has also started to implement Microsoft Office 365 for cloud-based access to collaboration software and file storage. And, the organization plans to move appropriate production services environments to Azure within 18 months.

Cutting costs and gaining flexibility

The changes reflect the organizations overarching IT strategy. "The transition to Microsoft Azure is about moving from a model based on capital expenditure to one based on operational expenditure," says Chilton. "That's what a lot of the industry is doing: moving from a 'we own' to a 'we subscribe' model."

By moving to the cloud, the Port Authority can take on current and future challenges more easily. "We have a flexible platform now," says Chilton "If we had to upgrade some infrastructure to accommodate a new business requirement, we can do it without actually having to procure, install, and integrate infrastructure. It makes provision of services to our customers sleeker and smoother."

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Software

- **Microsoft Azure**
  - Azure Active Directory
  - Azure Backup
  - Azure ExpressRoute
  - Azure Site Recovery
  - Azure Virtual Machines
- **Microsoft Azure StorSimple 8100 appliance**
- **Microsoft Operations Management Suite**
- **Microsoft System Center Operations Manager**

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